



NOTICE OF ALLOWANCE AND ISSUE FEE DUE

MM41/1221

JAMES V. COSTIGAN,
HEDMAN GIBSON & COSTIGAN
1185 AVENUE OF THE AMERICAS
NEW YORK, NY 10036-2646

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/006,763	01/14/98	003	NEGRON, J. 2875	12/08/99
First Named Applicant: KENMOSHI, YOSHIO				
TITLE OF INVENTION: ILLUMINATED KEYPAD KEF AND METHOD OF MANUFACTURE (AS AMENDED)				

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 712-017	200-341,000	E41	UTILITY	YES	\$605.00	03/08/00

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

If the SMALL ENTITY is shown as NO:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/006,763 01/14/98 KENMOCHI

Y 712-017

EXAMINER

MM21/1208

JAMES V COSTIGAN
HEDMAN GIBSON & COSTIGAN
1185 AVENUE OF THE AMERICAS
NEW YORK NY 10036-2646

ART UNIT PAPER NUMBER

DATE MAILED:

2875

12/08/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Notice of Allowability

Application No.

09/006,763

Examiner

Ismael Negron

Applicant(s)

KENMOCHI, YOSHIO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

1. ☒ This communication is responsive to 11/8/99.
2. ☒ The allowed claim(s) is/are 11-17.
3. ☐ The drawings filed on _____ are acceptable.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of the CERTIFIED copies of the priority documents have been
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

5. ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

A SHORTENED STATUTORY PERIOD FOR REPLY to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office Action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be available under the provisions of 37 CFR 1.136(a).

6. ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
7. ☒ Applicant MUST submit NEW FORMAL DRAWINGS
- (a) ☒ because the originally filed drawings were declared by applicant to be informal.
- (b) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review(PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No. _____.
- (c) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the examiner.
- (d) ☐ including changes required by the attached Examiner's Amendment / Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

8. ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any reply to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE / SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
- 3 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 5 ☐ Information Disclosure Statements (PTO-1449), Paper No. _____.
- 7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2 ☐ Notice of Informal Patent Application (PTO-152)
- 4 ☐ Interview Summary (PTO-413), Paper No. _____.
- 6 ☒ Examiner's Amendment/Comment
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

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DETAILED ACTION

Response to Amendment

Applicant's amendment filed on November 8, 1999 has been entered. Claims 1-10 have been cancelled. Claims 11-17 have been added to the application, with claims 11-13 being independent.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James V. Costigan on December 6, 1999.

The application has been amended as follows:

IN THE ABSTRACT:

✓ In line 2, delete the words "which is comprised of" and insert the word
--having--;

IN THE CLAIMS:

✓ In claim 11, line 4, delete the words "100 mm – 200 mm" and insert the words –100 μ m - 200 μ m--;

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↘ In claim 11, line 5, delete the second occurrence of the word "the" and insert the word --a--;

↘ In claim 11, line 11, delete the word "a" and insert the word --the--;

↘ In claim 12, line 11, delete the second occurrence of the word "the" and insert the word --a--; and

↘ In claim 15, line 2, delete the second occurrence of the words " of the operating shaft".

Drawings

2. The application having been allowed, **formal drawings are required** in response to this Office Action.

Allowable Subject Matter

3. Claims 11-17 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Applicant teaches an illumination key having:

- **a light permeable resin key top;**
- **a film having a pattern formed in one side, such film having a thickness of 100µm - 200 µm;**

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- the film being fixed to the upper and side surfaces of a transparent resin key top;
- the film having no portions that extends beyond the lower periphery of the key top;
- an upper surface of a key operating portion being made from a transparent rubber or thermoplastic elastomer;
- the upper surface of the key operating portion being fixed to the underside surface of the key top by means of a transparent adhesive.

The applicant also teaches an illumination key having:

- a key operating portion made of transparent rubber or thermoplastic elastomer;
- a transparent resin key top mounted and bonded to the top of the key operating portion;
- an operating shaft formed on a central portion of the underside of the keytop; and
- a cavity formed on the underside of the key top to reduce the thickness of the key top.

In addition, the applicant teaches a method of manufacturing an illumination key, such method having the following steps:

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- **setting a film having a pattern formed in one side inside a mold;**
- **injecting a light permeable resin material into the mold to form a transparent resin key top;**
- **fixing a film having a pattern to the upper and the side surfaces of the transparent resin key top;**
- **cutting away portions of the film that extend beyond the lower periphery of the key top using a jig;**
- **fixing the upper surface of the key operating portion to the under side of the key top using a transparent adhesive.**

No prior art was found disclosing individually nor teaching in combination all of the features of the applicants' invention.

Norris (U.S. Pat. 5,510,584) discloses a key top having a cavity formed on the underside of the key top and an operating shaft, but fails to disclose a transparent key top and a transparent key-operating portion.

Inagaki et al. (U.S. Pat. 5,475,192 and U.S. Pat. 5,399,821) and **Kenmochi** (U.S. Pat. 5,234,744) disclose a key top made from a transparent resin material, molded on a sheet of a resin film. However, they fail to disclose a film thickness of 100 μ m - 200 μ m, or a cavity formed on the underside of the key top.

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Moriike (U.S. Pat. 5,120,920) discloses a key top made of a transparent or translucent synthetic resin and an outer member formed of an opaque synthetic resin, but fails to disclose an key operating portion or a film having a thickness of 100 μ m - 200 μ m adhere to the top surface of the key top.

Takii et al. (U.S. Pat. 5,036,440) discloses an illumination type key top with a light restricting member disposed opposite a display portion layer. Takii et al fails to disclose a film having a pattern formed on one side of the key top, the film having a thickness of 100 μ m - 200 μ m.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (703) 308-6086. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (703) 305-4939. The facsimile machine number for the Art Group is (703)308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

inr

December 6, 1999

Attachment _____

The drawings submitted with this application were declared informal by the applicant. Accordingly, they have not been reviewed by a draftsman at this time. When formal drawings are submitted, the draftsman will perform a review.

Direct any inquiries concerning drawing review to the Drawing Review Branch (703) 305-8404.